

standard photosites which exceed a third threshold and (c) replaces the digital image signals from non-standard photosites less than the second low exposure response threshold with a combination of the digital image signals from a neighborhood of standard photosites which exceed a fourth threshold, thereby producing an output digital image signal with an extended effective dynamic range.

37. The image capture system as claimed in claim 36 wherein the third threshold is equivalent to the high exposure response threshold.

38. The image capture system as claimed in claim 36 wherein the fourth threshold is equivalent to the low exposure response threshold.

39. The image capture system as claimed in claim 1, wherein the photosites are color photosites and are arranged in such a manner that the nearest photosite with the same color to a given photosite does not have the same response as the given photosite.

40. The image capture system as claimed in claim 1, wherein the photosites are color photosites and are arranged such that the four photosites constituting the nearest neighbors of a given non-standard photosite comprise two standard photosites and two nonstandard photosite.

41. The image capture system as claimed in claim 40, wherein the photosites are color photosites and are arranged such that the four photosites constituting the nearest neighbors of a given standard photosite comprise two standard photosites and two nonstandard photosites.

42. The image capture system as claimed in claim 41, wherein the photosites are color photosites and are arranged such that the eight photosites constituting the nearest neighbors of a given standard photosite which is green in color comprise four non-standard photosites which are green in color, one standard photosite which is red in color, one standard photosite which is blue in

color, one non-standard photosite which is red in color, and one non-standard photosite which is blue in color.

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43. The image capture system as claimed in claim 41, wherein the photosites are color photosites and are arranged such that the eight photosites constituting the nearest neighbors of a given non-standard photosite which is green in color comprise four standard photosites which are green in color, one standard photosite which is red in color, one standard photosite which is blue in color, one non-standard photosite which is red in color, and one non-standard photosite which is blue in color.

44. The image capture system as claimed in claim 41, wherein the photosites are color photosites and are arranged such that the eight photosites constituting the nearest neighbors of a given photosite which is red in color comprise two non-standard photosites which are green in color, two standard photosites which are green in color, two standard photosites which are blue in color, and two non-standard photosites which are blue in color.

45. The image capture system as claimed in claim 41, wherein the photosites are color photosites and are arranged such that the eight photosites constituting the nearest neighbors of a given photosite which is blue in color comprise two non-standard photosites which are green in color, two standard photosites which are green in color, two standard photosites which are red in color, and two non-standard photosites which are red in color.

46. The image capture system as claimed in claim 1, wherein the photosites are arranged in such a manner such that the nearest photosite to a given photosite does not have the same response as the given photosite.

47. The image capture system as claimed in claim 1, wherein the photosites are arranged such that the four photosites constituting the nearest neighbors of a given non-standard photosite comprise four standard photosites.